

REMARKS

Favorable reconsideration of the application is respectfully requested in light of the amendments and remarks herein.

Upon entry of this amendment, claims 1-7 will be pending. By this amendment, claims 1, 6, and 7 have been amended. No new matter has been added.

Objections to the Specification

In Section 2 of the Office Action, the Examiner has objected to the Title. The title has been replaced as suggested. Further, the Specification has been amended to correct minor typographical errors.

§102 Rejection of Claims 1-4 and 6-7

In Section 4 of the Office Action, the Examiner has rejected claims 1-4 and 6-7 under 35 U.S.C. §102(b) as being anticipated by Verboom *et al.* (U.S. Patent No. 5,574,706; hereinafter referred to as “Verboom”). Claims 1, 6, and 7 have been amended to address the rejection.

In the Background section of the Specification, it was disclosed that “[c]auses generating a focal discrepancy in focusing control include a steady-state deviation due to a residual left at a servo time, a shift in focal-point position due to variations in plate thickness from disc to disc and a variation in offset due to an increase in temperature inside a disk drive setting the disc.”

Background of the Specification, page 4, lines 18-23.

“In moving the optical pickup making an access to the disc to the correction area to carry out a correction, however, there is raised a problem that the recording or playback operation must be temporarily suspended. In order to solve this problem in a case wherein data must be

processed in a real-time manner, it is necessary to provide the recording and playback apparatus with additional components such as a buffer for temporarily storing data to be processed during the correction. The necessity to provide the recording and playback apparatus with additional components such as a buffer for facilitating a correction raises another problem of a more complex configuration of the recording and playback apparatus.” *Background of the Specification, page 6, line 19 to page 7, line 8.*

To solve the above-stated problem, embodiments of the present invention provide a capability “to shorten the time it takes to carry out a correction in focusing control by execution of the correction with a predetermined timing by moving an optical pickup to a location, [where] data has already been recorded at and is closest to a current position of the optical pickup in a recording or playback operation being carried out, and using an RF signal [obtained from] the data already recorded at the closest location.” *Specification, page 7, lines 12-20.* For example, the structure of apparatus claim 1, as presented herein, includes:

“*judgment means* for forming a judgment as to whether or not to correct focus precision in an operation to record data onto an Nth track of said recording medium or play back data from said Nth track; and

“*correction means* which is used for correcting said focus precision if said judgment means forms a judgment to correct said focus precision in said operation to record data onto said Nth track of said recording medium or play back data from said Nth track by using an RF signal obtained from an already recorded track closest to said Nth track.” (emphasis added)

The correction means, in claim 1, for correcting the focus precision by using an RF signal obtained from an already recorded track closest to the current track is supported in the Detailed Description Section as follows.

“In addition, by playing back the existing data, an RF signal can be obtained. In this embodiment, focus precision is corrected by using an RF signal representing data recorded on a track preceding the current location of the optical pickup 17 on the optical disk 11 by 1 track.” *Specification, page 19, lines 16-21.*

“The RF signal represents data read out by the optical pickup 17 from the position of the controlled focus on the optical disk 11.” *Specification, page 21, lines 3-6.*

“Then, at this focal position, an RF signal representing data read out by the optical pickup 17 from the optical disk 11 is supplied to the performance-function-value computation circuit 25 by way of the APC circuit 16. The performance-function-value computation circuit 25 computes a performance-function value F(fd + a) based on the jitters value or the amplitude which is extracted from the RF signal.” *Specification, page 23, lines 6-13.*

Therefore, embodiments of the present invention achieve quick correction of the focus precision because the pickup does not have to be moved to where the information is recorded.

Although it was indicated in the Office Action that Verboom discloses a recording and playback apparatus including a correction means to correct the focus precision, it is respectfully submitted that Verboom, however, fails to teach or suggest correcting the focus precision by using an “RF signal obtained from an already recorded track closest to said Nth track”.

Verboom indicates that it uses the Standard Format Part (SFP) track, which includes information about the format of the disc. Thus, it can be inferred that Verboom uses the signal from the SFP track as “data” rather than reading it as a raw RF signal.

Based on the foregoing discussion, it is maintained claim 1 should be allowable over Verboom. Furthermore, since independent claims 6 and 7 closely parallel, and include substantially similar limitations as, independent claim 1, claims 6 and 7 should also be allowable

over Verboom. Since claims 2-4 depend from claim 1, and claims 2-4 should also be allowable over Verboom.

Accordingly, it is submitted that the Examiner's rejection of claims 1-4 and 6-7 based upon 35 U.S.C. §102(b) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 2

In Section 5 of the Office Action, the Examiner has rejected claim 2 under 35 U.S.C. §103(a) as being unpatentable over Verboom in view of Niwayama (U.S. Patent No. 5,485,443).

Based on the foregoing discussion regarding claim 1, and since claim 2 depends from claim 1, claim 2 should be allowable over Verboom. Further, in Section 5 of the Office Action, it was indicated that Niwayama discloses a judgement means. Thus, Niwayama fails to teach or suggest correcting the focus precision by using an "RF signal obtained from an already recorded track closest to said Nth track". Therefore, Verboom and Niwayama, in combination or individually, fail to teach or suggest the limitations recited in claim 2.

Accordingly, it is submitted that the Examiner's rejection of claim 2 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 3

In Section 6 of the Office Action, the Examiner has rejected claim 3 under 35 U.S.C. §103(a) as being unpatentable over Verboom in view of Koyama *et al.* (U.S. Patent No. 5,517,475; hereinafter referred to as "Koyama").

Based on the foregoing discussion regarding claim 1, and since claim 3 depends from claim 1, claim 3 should be allowable over Verboom. Further, in Section 6 of the Office Action, it was indicated that Koyama discloses a judgement means. Thus, Koyama fails to teach or suggest correcting the focus precision by using an "RF signal obtained from an already recorded track closest to said Nth track". Therefore, Verboom and Koyama, in combination or individually, fail to teach or suggest the limitations recited in claim 3.

Accordingly, it is submitted that the Examiner's rejection of claim 3 based upon 35 U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

§103 Rejection of Claim 5

In Section 7 of the Office Action, the Examiner has rejected claim 5 under 35 U.S.C. §103(a) as being unpatentable over Verboom in view of Tani *et al.* (U.S. Patent No. 6,574,177; hereinafter referred to as "Tani").

Based on the foregoing discussion regarding claim 1, and since claim 5 depends from claim 1, claim 5 should be allowable over Verboom. Further, in Section 7 of the Office Action, it was indicated that Tani discloses "a correction means capable of correcting said focus precision by determining a focus bias value that provides the absolute value of a difference within a threshold value k". Thus, Tani fails to teach or suggest correcting the focus precision by using an "RF signal obtained from an already recorded track closest to said Nth track". Therefore, Verboom and Tani, in combination or individually, fail to teach or suggest the limitations recited in claim 5.

Accordingly, it is submitted that the Examiner's rejection of claim 5 based upon 35

U.S.C. §103(a) has been overcome by the present remarks and withdrawal thereof is respectfully requested.

Conclusion

In view of the foregoing, entry of this amendment, and the allowance of this application with claims 1-7 are respectfully solicited.

In regard to the claims amended herein and throughout the prosecution of this application, it is submitted that these claims, as originally presented, are patentably distinct over the prior art of record, and that these claims were in full compliance with the requirements of 35 U.S.C. §112. Changes that have been made to these claims were not made for the purpose of patentability within the meaning of 35 U.S.C. §§101, 102, 103 or 112. Rather, these changes were made simply for clarification and to round out the scope of protection to which Applicant is entitled.

In the event that additional cooperation in this case may be helpful to complete its prosecution, the Examiner is cordially invited to contact Applicant's representative at the telephone number written below.

The Commissioner is hereby authorized to charge any insufficient fees or credit any overpayment associated with the above-identified application to Deposit Account 50-0320.

Respectfully submitted,

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